



PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number: 07314-013001
<p>I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Mail Stop AF, Commissioner for Patents, Box 1450, Alexandria, VA 22313-1450.</p> <p>June 14, 2006</p> <p>Date of Deposit</p> <p><i>Julie H. Giordano</i></p> <p>Signature</p> <p>Julie H. Giordano</p> <p>Typed or Printed Name of Person Signing Certificate</p>	Application Number 09/905,039	Filed July 12, 2001
	First Named Inventor Gary A. Demos	
	Art Unit 2613	Examiner Y. Young Lee
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a Notice of Appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s).</p> <p>Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <p><input type="checkbox"/> applicant/inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> attorney or agent of record <u>53,688</u> (Reg. No.)</p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34</p> <p><i>Dwight U. Thompson</i></p> <p>Signature</p> <p>Dwight U. Thompson</p> <p>Typed or printed name</p> <p>(858) 678-5070</p> <p>Telephone number</p> <p>June 14, 2006</p> <p>Date</p>		
<p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.</p> <p><input checked="" type="checkbox"/> Total of 4 forms are submitted.</p>		



UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Gary A. Demos

Art Unit: 2613

Serial No.: 09/905,039

Examiner: Y. Young Lee

Filed: July 12, 2001

Title: METHOD AND SYSTEM FOR IMPROVING COMPRESSED IMAGE
CHROMA INFORMATION

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Commissioner for Patents

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Pursuant to United States Patent and Trademark Office OG Notices: 12 July 2005 – New Pre-Appeal Brief Conference Pilot Program, a request for review of identified matters on appeal is hereby submitted with the Notice of Appeal. Review of these identified matters by a panel of examiners is requested because the rejections of record are clearly not proper and are without basis, in view of a clear legal or factual deficiency in the rejections. All rights to address additional matters on appeal in any subsequent appeal brief are hereby reserved.

Status of Claims

Claims 8-15, 37-44, 66-73, and 88-90 are pending, with claims 8-10, 12-14, 37-39, 41-43, 66-68, and 70-72 being independent. Claims 8-15, 37-44, 66-73 and 88-90 stand rejected under 35 U.S.C. 102(b) as allegedly being anticipated by Naimpally et al. (5,294,974).

Claims 8-15, 37-44, 66-73

1.) Naimpally does not disclose features recited in Claims 8-10, 12-14, 37-39, 41-43, 66-68, and 70-72. Claims 8-10, 37-39, 66-68 require (a) **“the second QP value is dependent only upon a relationship to the first QP value,”** (b) “wherein the relationship comprises a property that the second QP value for said first macroblock is lower than the first QP value so that said at

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June 14, 2006

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Signature

Julie H. Giordano

Typed or Printed Name of Person Signing Certificate

least one of the U and V color channels has finer quantization resolution than the Y luminance channel for said first macroblock,” and (c) where the first QP value is for the Y luminance channel and the second QP value is for at least one of the U and V color channels in the macroblock (emphasis added and supported on pages 13-15, paragraphs 39-42 of specification). Claims 12-14, 41-43, and 70-72 recite these features in “a first relationship.” Instead, Naimpally teaches that the second QP values are **a function of other types of relationships**, and not only a relationship to the first QP value as recited in Claims 8-10, 12-14, 37-39, 41-43, 66-68, and 70-72. Naimpally does not disclose this feature. For example, Naimpally teaches the following types of relationships.

A.) Naimpally discloses two conditions to vary the QP values of the luminance and/or chrominance blocks, where neither condition is based on the relationship as recited in the claims.

In a first condition, if Naimpally does not detect chrominance blocks of near-red pixel values, then Naimpally discloses using the default prior art system of Fig. 1 **where the quantization step size remains the same for both the luminance and chrominance blocks** (Naimpally: Fig. 1, Col. 5, lines 13-24 describe the problems with the quantization of Fig. 1). Since the same quantization step size is used for the luminance and chrominance blocks of pixel values, then above-recited feature of “the second QP value for said first macroblock is lower than the first QP value” is not disclosed for the prior art (Fig. 1) condition.

In a second condition, **Naimpally looks to other things besides the above-recited relationship** in the claims to adjust quantization for the luminance and/or chrominance blocks. For example, Naimpally discloses that the QP values of the chrominance blocks ((B-Y), (R-Y)) of pixel values are **dependent upon a function of detecting a red or near-red color that is saturated or nearly saturated in a macroblock** (herein “near-red color”) (Naimpally: Col. 1, lines 5-12; Col. 2, lines 16-25; Col. 5, lines 47-50; Col. 6, lines 58-68; Col. 7, lines 1-6). So if a near-red color is detected in the chrominance blocks by Naimpally’s circuitry (Fig. 2, 6), then Naimpally discloses adjusting the QP values of the chrominance blocks so that finer quantization steps are used for the chrominance blocks. Therefore, these QP values are not based only on a relationship to another QP value as claimed. Rather they are based on the color (e.g., the “near red-color”).

In the description of the second condition, Naimpally states that Fig. 2 is a block diagram of a video encoding system and is the prior art video encoding system Fig. 1 with new circuit

blocks added for the color average circuit 208, the color detector circuit 210, and the quantization modifier circuit 212 (Naimpally: Col. 2, lines 31-35, 59-60; Col. 5, lines 29-35). The color average circuit 208 receives a signal from a block converter 110, averages the sixty-four pixel values in each of the (B-Y) and (R-Y) blocks in the macroblock, and those two average values are sent to the color detector 210 (Naimpally: Col. 5, lines 30-62). Fig. 6 shows an exemplary color detector circuit 210 (Naimpally: Col. 5, lines 63-68, Col. 6, lines 1-28). Naimpally states that the color detector circuitry 210 is for detecting chrominance blocks of near-red color pixel values (Naimpally: Col. 5: lines 35-46; Figs. 5, 6). Naimpally discloses that the color detector circuit 210 then conditions the modifier 212 to adjust the quantization step size for the near-red blocks of pixels for (B-Y) and (R-Y) (Naimpally: Col. 5, lines 35-68). In particular, if the color detector circuitry 210 detects chrominance blocks of pixel values in that color and saturation range, then the modifier circuit 212 and the quantizer-control circuitry 122 changes the quantization step size of those chrominance blocks “using finer quantization steps than would normally be used” (Naimpally: Col. 5, lines 42-47).

The rejection also specifically refers to Col. 6, lines 28-36 of Naimpally, which discloses that the QP values of both the luminance and chrominance blocks of pixels are increased as a function of detecting a saturated near-red color in a macroblock (Naimpally: Col. 6, lines 28-34). Naimpally also discloses that the QP values for the chrominance blocks alone are modified in response to the detection of a saturated near-red color in a macroblock (Naimpally: Col. 6, lines 34-36). Therefore, regardless of whether the QP values of both the chrominance and luminance blocks of pixels are changed together or the QP values of the chrominance blocks of pixels are changed alone, Naimpally discloses that changes to the QP values of the chrominance blocks of pixels are a function of detecting a red or near-red color that is saturated or nearly saturated in a macroblock.

Hence, Naimpally discloses that (1) the QP values of the chrominance blocks of pixel values are **dependent upon a function of color and saturation**, and (2) the chrominance blocks of pixel values are adjusted for finer quantization steps for the **near-red color pixel values**. Naimpally fails to disclose the claimed feature of “the second QP value is **dependent only upon a relationship to the first QP value**,” and instead looks to other things (e.g., color) besides the above-recited relationship in the claims to adjust quantization for the luminance and/or chrominance blocks. Therefore, there is a factual deficiency in the 02/16/2006 Office Action,

and the rejection under 35 U.S.C. 102(b) to Claims 8-10, 12-14, 37-39, 41-43, 66-68, and 70-72 is improper and should be withdrawn.

B.) Naimpally discloses that the QP values are dependent upon an average of the (B-Y) and (R-Y) sample or pixel values in a macroblock (Naimpally: Col. 5, lines 65-68; Fig. 6; Tables 1-3 show relationships using average chrominance blocks; Fig. 6 shows average input chrominance blocks from color average circuit 208 as inputs to the ROM 210). The chrominance QP values are not dependent only upon the luminance QP values in Naimpally. Therefore, the claims are further patentable for at least this reason.

C.) Naimpally discloses that the QP values are dependent upon a quantization divider (quantizer circuitry 122) to multiply QP values “by factors ranging from one-quarter to two in steps of one-quarter,” where the factors for multiplication depend upon the average QP values and the color and saturation (Naimpally: Col. 6, lines 25-28; Col. 7, lines 22-60; and Tables 1-3 show the “quantization divider” multiplication factors and corresponding functions for AVG (B-Y) and AVG (R-Y)). Naimpally’s chrominance QP values are not dependent only upon the luminance QP values. Hence, the rejection under 35 U.S.C. 102(b) to the claims should be withdrawn.

2.) An effect of the claimed system is that Naimpally does not allow for the different treatment of cases where the QP values are small from those cases where the QP values are large. Naimpally treats high-quality compression the same as low-quality compression, regardless of the multiplication factor for the QP values (Naimpally: Col. 6, lines 25-28; Tables 1-3). However, the current application allows high-quality compression to be treated differently from low-quality compression and recites techniques for different treatment via the relationship between the first and second quantization values (e.g., see the “selecting” language in Claims 12, 13, 14, 41, 42, 43, 70, 71, and 72).

Therefore, the rejection does not meet the Patent Office’s burden of providing a *prima facie* showing of unpatentability. Thus, Claims 8-10, 12-14, 37-39, 41-43, 66-68, and 70-72 are patentable over Naimpally for at least these reasons.

Claims 88-90

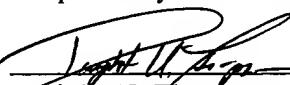
Claims 88-90 are patentable for at least depending upon an allowable base claim (e.g., base Claims 8 or 12 for Claim 88; base Claims 37 or 41 for Claim 89; and base Claims 66 or 70 for Claim 90), as well as for reciting patentable subject matter in their on right. The 02/16/2006

Office Action alleges that Naimpally discloses a look up table, and therefore, dependent Claims 88-90 are anticipated. As discussed above with respect to Figs. 2 and 6, Naimpally fails to disclose the relationship as recited in the base claims. Instead, **Naimpally discloses in Tables 1-3 that the quantization step size is dependent upon (1) color and saturation, (2) an average of the (B-Y) and (R-Y) sample or pixel values in a macroblock, and (3) a quantization division factor** (Naimpally: Col. 6, lines 25-28, 37-44; Col. 7, lines 9-12, 23-25; see "AVG (B-Y)," "AVG (R-Y)," "Quantization divider" in Tables 1-3). Tables 1-3 show programs for the ROM 210 located at the input of the color detector circuit 210 of Fig. 6 that controls quantization based on color and saturation and an average of the input chrominance blocks of pixel values. Naimpally discloses in Tables 1-3 that the quantization step size ("Quantization divider") is dependent upon "red or near-red macroblocks" (Table 1), "near red signals with include some blue" (Table 2), "cyan and near-cyan objects and ... red and near red objects" (Table 3) (Naimpally: Col. 7, lines 61-68; Col. 8, lines 1-5). Dependent Claims 88-90 cannot be anticipated if Naimpally fails to disclose the feature of the relationship as recited in the respective base claims. Therefore, Claims 88-90 are patentable over Naimpally.

In view of these arguments, it is respectfully suggested that the cited art fails to disclose, teach, or suggest all of the claimed features, and therefore, all of the claims should be in condition for allowance. A reversal of the examiner's position is thus respectfully requested.

A Petition for a One-Month Extension of Time and Notice of Appeal are enclosed. Please charge the fees to our Deposit Account No. 06-1050 along with any other charges or credits.

Respectfully submitted,


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Date: June 14, 2006

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